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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,648	09/30/2003	Kenneth E. Salsman	ITL.1005US (P16610)	5824
21906	7590	11/27/2007		
TROP PRUNER & HU, PC 1616 S. VOSS ROAD, SUITE 750 HOUSTON, TX 77057-2631			EXAMINER FATAHI YAR, MAHMOUD	
			ART UNIT 2629	PAPER NUMBER
			MAIL DATE 11/27/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/675,648

Applicant(s)

SALSMAN, KENNETH E.

Examiner

Mike Fatahiyar

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-9 and 27-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-9 and 27-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. Claims 1-3, 5-9 and 27-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 27, the recitation "providing a signal to a liquid crystal cell" vague, indefinite and incomplete because it is not clear to what it refers. What establishes or what this signal is consisted of is unclear. Also, It is not clear how or in response to what or what element or means is responsible for generating this signal. Correction and/or clarification is required.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1,9 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Liu(2003/0147029A1).

Liu discloses a method and an apparatus for providing a low voltage signal to a liquid crystal cell and driving a data electrode of the liquid crystal cell with an ultra low voltage not grater than 3.3 volts(see paragraphs[0046] – [0049] and figures 5a and 10).

As to the claim 9, Liu also utilizes a retarding film less a quarter wave(see paragraph[0045]).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-3, 5-6 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu in view of Fujii(7,071,929B2).

Liu is discussed above. Fujii is cited to show that the concept of driving an LCD cell with digital low pulse width modulated square wave pulses which are updated every frame is old(see abstract; column , lines 47-67; column 3, lines 1-67). Thus, it would have been obvious to one of ordinary skill in the art to modify the of Liu with the above noted teachings of Fujii such that to drive the LCD cell of Liu with variable low digital pulse width modulated voltage so that to select a desired gray level because both references are related to driving an LCD cell with low voltages.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu in view of Yoshihara et al(6,762,743B2).

Liu is discussed above. Yoshihara et al is cited to show that the concept of driving an LCD cell at a frequency greater than 120 hertz having at least two different colors is old(see column 8). Therefor, it would have been obvious to one of ordinary skill

in the art to modify the system of Liu with the above noted teachings of Yoshihara et al such that to drive the LCD cell of Liu at frequencies greater than 120HZ and having at least two colors because it is conventional for using such frequencies for reducing image flickering during the LCD driving.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu and Yoshihara et al as applied to claim 7 above, and further in view of De Smet et al(WO2004/001715A1).

Liu and Yoshihara et al are discussed above. De Smet et al is cited to show that the concept of utilizing a color wheel(17, see figure 7) for generating at least two colors for driving of an LCD cell is old. Thus, it would have been obvious to one of ordinary skill in the art to apply the above noted teaching of De Smet et al to the modified system of Liu such that to utilize a color wheel for generation of at least two colors because such is an alternative equivalent of using color filters which is considered to be within the purview of one of ordinary skill in the art.

8. Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu in view of An(6,317,121B1).

Liu is discussed above. An is cited to show that the concept of utilizing at least two buffers to provide frame updates in an LCD driving circuitry is old(column 5, lines 1-67 and column 6, lines 1-26). Thus, it would have been obvious to one of ordinary skill in the art to modify the system of Liu with the above noted teachings of An such that to

provide double buffers in the system of Liu in order to provide frames updates because both references are related to driving of LCD display device with low voltages.

9. Applicant's arguments with respect to claims 1-3, 5-9 and 27-30 have been considered but are moot in view of the new ground(s) of rejection.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jeon et al, Richards, Oh and Shimada et al are made of record to show various types of very low voltage driving of LCD cell.

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Fatahiyar whose telephone number is (571)272-7688. The examiner can normally be reached on Monday-Friday from 9:30 to 6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MF

M. Fatahiyar
November 25, 2007



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
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